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ABSTRACT

A total of 300 elementary and secondary public school teachers were surveyed in order 1) to develop a taxonomy of disciplinary techniques that is both quantitative and qualitative; and 2) to compare the relationship of teachers' disciplinary repertoires with type of school (urban, suburban, or rural), age of pupils, and teacher experience. The teachers responded to a questionnaire which asked them to list the types of disciplinary techniques they use in the classroom. Results indicated that among all the teachers in the sample, temporary loss of freedom was the most frequently used technique, whereas permanent removal and non-verbal techniques were the least frequently used. Multiple analysis of variance indicated several differences in disciplinary techniques between teachers in different types of schools, with different ages of children, or of different experience. It is suggested that further study be done on this topic using actual observation of teachers in the classroom. (RT)

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DISCIPLINARY TECHNIQUES: REPERTOIRES AND RELATIONSHIPS

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DISCIPLINARY TECHNIQUES: REPERTOIRES AND RELATIONSHIPS

The compliance of youth to the rules and regulations of a society is necessary for the effective maintenance and functioning of that society. Achieving and maintaining some degree of compliance to the rules and regulations in school and classroom settings has been traditionally accomplished through some mode of discipline. Discipline as it is used in most educational institutions, i.e., to promote the socialization process, may be defined as, "the control exercised by a superior over a subordinate; especially, the direct control of conduct and punishment for misconduct" (English and English, 1958).

There has been a paucity of research dealing with discipline. Moreover, the research in the area has been limited to studying the effects of discipline on students' attitudes and behaviors (Woodruff, 1958 and Smith, 1969). Whenever the focus of a disciplinary study has been on the teacher, the scope has been too narrow to permit generalization and comparison with regard to other variables affecting teacher behavior (Carrison, 1959 and Barnes, 1963). An exception to this was Crispin's Study (1968) which utilized a psychological level of analysis. One of Crispin's conclusions was that personality variables of teachers affected the kinds of discipline employed in the classroom.

Remaining unanswered by past research, however, is the question of whether other variables of an ecological and sociological nature affect the techniques of discipline used by classroom teachers.

BACKGROUND OF THE PROBLEM

In attempting to understand teacher behavior educational researchers have generally neglected the ecological environment. The ecological environment for a teacher is composed of three major factors:

1. The physical things and people in the school setting.
2. The rules governing the things and people.
3. The arrangement of things and people according to the rules.

The influence of the ecological environment on teachers has been experienced by them on a very basic phenomenological level. Statements reflecting this experience include: "I just had to get out of that situation; it was destroying me," or "that was one of the best school settings in which I ever worked." While there is little research related to ecological effects on teachers, Barker (1964) has investigated the influence of the ecological environment on students and reported his findings in, Big School, Small School (1964). Drawing from his research Barker developed an approach that he refers to as ecological psychology and defines it as "being concerned with both molecular and molar behavior, and with both the psychological . . . and ecological environment (the objective, preperceptual context of behavior; the real-life settings within which people behave)" (1968). The major unit of analysis in Barker's ecological psychology is a "behavioral setting." A behavioral setting has " . . . both structural and dynamic attributes. On the structural side, behavioral setting consists of one or more standing patterns of behavior-and-milieu, with the milieu circumjacent and synomorphic to the behavior. On the dynamic side, the behavior-milieu factors of a behavioral setting, the synomorphs, have a specified degree of interdependence among themselves

that is greater than their interdependence with parts of other behavioral settings" (1968). In a more simple vein we might define a behavioral setting as a part of community, or school, that has both structural and dynamic properties. Examples of behavioral settings are: basketball games, Mrs. Smith's English class, faculty meetings, faculty lunches in the school cafeteria, the principal's office, and the faculty lounge. The factor that is outstanding about each of these behavioral settings is that the structure of the setting and what occurs in the setting are relatively invariant. In the research on "big schools" and "small schools" Barker found that the size of the school influences the number of behavioral settings available to students and the frequency of participation in the behavioral settings. The gist of the "big school, small school" study was that different size schools have different ecological environments (behavioral settings) and these influence the inhabitants of the environment.

Since differing ecological environments have differential influences on students, we may speculate about the influence of the ecological environment on teachers. Barker (1968) suggested that behavioral settings influence the behavior of the inhabitants in six different ways:

1. Physical forces, such as facilities.
2. Social forces, the enforcement of certain behaviors in those settings.
3. Physiognomic perception, the physical arrangement "suggests" certain behaviors.
4. Learning to behave appropriately in a behavioral setting.
5. Selection by persons, individuals tend to self-select themselves into behavioral settings when there is an affinity between their behavioral repertoires and the standing pattern of a behavioral setting.
6. Selection by behavior settings, many behavioral settings eject persons who do not conform to the standing patterns of behavior.

It could be deduced from Barker's theory that all six of these influences operating upon a teacher would tend to produce similar behavioral repertoires of teachers who occupy similar behavioral settings.

The present study is an investigation into the influence of different general behavioral settings upon a specific behavioral repertoire -- the repertoire of disciplinary techniques. It was felt that type of school (inner city, suburban, rural) and grade level (K-6, 7-12) represented ecological environments that possessed differing behavioral settings. According to Barker (1968) the different behavioral settings should influence the disciplinary repertoires of teachers. The number of hours of teaching experience was also included as a variable in the study because the influence of the behavioral setting may increase with the amount of time spent in the setting.

PROBLEM STATEMENT

The problem was of the "unchartered area" type, in that the investigation dealt with teacher and ecological variables that heretofore have not been studied. Specifically, the study concerned itself with the establishment of a taxonomy of disciplinary techniques and the analysis of these techniques in terms of kind, severity level, and relationship to different ecological environments.

PURPOSE

The major focus of the present study was suggested by Barker (1968) and Crispin (1968). Their studies suggested the use of the type of school, experience of the teacher and age of the student as variables with possible potential for affecting the behavior of teachers. The present study used these variables in an attempt to analyze their effect(s) on the disciplinary

repertoires of teachers. The repertoires were analyzed in terms of variety, number, and severity of disciplinary techniques.

METHOD

A thorough investigation of discipline should be preceded by the development of appropriate measurement instruments and techniques. In the present investigation it was decided to first develop a taxonomy of disciplinary techniques, then compare them with selected teacher variables. A pilot study was conducted to develop a taxonomy for the disciplinary repertoires of teachers.

The pilot phase consisted of obtaining open-ended responses from 282 experienced public school teachers enrolled in graduate courses of education. The sample consisted of elementary and secondary teachers from all types of schools and with varying years of experience. The teachers were asked to list the disciplinary techniques they used at their grade level and those with which they were familiar. Both the techniques presently used and those familiar to the teacher for the grade-level were assumed to constitute the teacher's disciplinary repertoire.

The specific disciplinary techniques were arranged by the investigators into fourteen general categories. These categories were then submitted to ten professors of education for further condensing. In addition, eighty-two specific disciplinary techniques were rated on an eleven point scale according to severity of impact on students' psychological adjustment by eighty-two public school teachers enrolled in graduate courses of education. A factor analysis of these data yielded twenty-four factors and mean severity values for each technique.

The investigator's original fourteen categories, the faculty participants' categories, and twenty-four factors from the factor analysis were reconciled into eight compromise categories that appeared to have a reasonable degree of face validity. These categories were:

1. Ridicule/Humiliation
2. Physical punishment
3. Removal to another teacher, school or agency
4. Use of others (principal, parents, peers)
5. Temporary loss of freedom (time and/or space)
6. Verbal (non-punitive)
7. Non-verbal (stares, gestures)
8. Academic involvement

The eight compromise categories were then ranked according to severity by the same ten faculty members. A comparison of the faculty ranking with the ranking achieved with severity level means of the factors included in the categories yielded a Rho of .19. The authors concluded that the eight compromise categories might represent both a logical and factorially sound categorization of discipline techniques but not necessarily reflect any hierarchy of severity. It was decided to use the eight compromise categories in one analysis since they would reflect different "kinds" of discipline and to perform another analysis using levels of severity which would hopefully be an attempt to ascertain the "magnitude" of the disciplinary repertoires. The five severity levels were obtained by ranking the twenty-four factors according to their mean severity values and then dividing these factors into five categories. The twenty-four

factors had a mean severity value range of nine points so when the factors were divided into five "levels of severity" each level represented a 1.8 point interval.

Three hundred teachers were asked to fill out a "Survey of Disciplinary Techniques" form (see Appendix A). Each teacher indicated on the survey form, among other things, the type of school at which they were presently employed, grade level presently taught, and how many years of teaching experience they possessed. The teacher was then requested to, "list the types of disciplinary techniques that you use in your classroom, then list all the techniques that you have heard about being used with this grade level. Separate the two lists with a line so that we can tell them apart." The total list of disciplinary techniques was considered to be the teacher's disciplinary repertoire.

The teachers' survey forms were then stratified according to the following three variables:

1. Experience of the teacher (less than five years and five or more years)
2. Grade level presently taught (K-6, 7-12)
3. Type of school at which they were presently employed (Inner city, Suburban, Rural)

The schools in which the teachers taught were classified according to the following criteria:

Inner-city -- Any public school within a city of more than 50,000 population and receiving Title I appropriations.

Suburban -- Any public school within a city of more than 50,000 population, or within its suburb, and not eligible for Title I appropriations.

Rural -- Any public school within a village of less than 5,000 population.

The stratification of the teachers' surveys according to the three prior variables yielded a two (levels of experience) by two (grade level taught) by three (type of school) matrix consisting of twelve cells. Fifteen teachers were randomly selected from each of the cells resulting in a sample size of 180. Thus, the major phase of the study was an analysis of the used and known disciplinary techniques of a sample of 180 public school teachers from the Southwest.

First the data were classified in terms of the eight compromise categories and then in terms of the five severity levels.

The classification of the 180 surveys according to the variables of experience, grade level taught, type of school, and kind and severity of discipline permits a comparison of how these variables influence a teacher's disciplinary repertoire. A teacher's disciplinary repertoire was considered to be the number of disciplinary techniques used and with which the teacher was familiar.

Based on the preceeding classifications, two major analyses were performed. First, a two (level taught: K-6, 7-12) by three (type of school: inner-city, suburban, rural) by two (teaching experience: less than five years, five years or more) by eight (compromise categories of discipline) analysis of variance with repeated measures over the eight compromise categories was conducted on the disciplinary techniques employed by teachers. Then, a two (experience) by two (grade level taught) by three (type of school) by five (levels of severity) analysis of variance with repeated measures over the five levels of severity was performed on the teachers' techniques of discipline. Consequently, the repertoires of disciplinary techniques were examined in terms of kinds of techniques and severity levels. The .05 level of confidence was used in both analyses.

RESULTS

Table I is a summary table for the analysis using the eight compromise categories. The significant main effect ($p < .01$) of the compromise categories indicated a difference among the eight categories. Figure 1 is a graphic illustration of the responses in each of the categories. From the graph it is evident that temporary loss of freedom is the most frequently used technique whereas permanent removal and non-verbal techniques are the least frequently used. The significance of the main effect, however, needs to be interpreted in light of the significant interactions.

The first significant first order interaction ($p < .01$) involved grade levels by categories and Figure 2 illustrates the interaction effect. Differences with grade levels existed in the categories of verbal (non-punitive) and academic involvement. The 7-12 grade level teachers used fewer non-punitive verbal techniques, but were more likely to involve academic assignments as disciplinary techniques than would K-6 grade level teachers.

The other significant first order interaction ($p < .01$) is the school by category. Figure 3 illustrates this interaction. The greatest differences lie in the categories of Ridicule/Humiliation with rural teachers scoring highest, suburban scoring lowest; Temporary loss of freedom, inner-city teachers lower than suburban and rural; and non-verbal techniques, as well as academic involvement, both of which have suburban teachers scoring higher than inner-city and rural.

A significant second order interaction ($p < .01$) was experience by grade by school. Figure 4 illustrates this interaction. Briefly, it indicates the greatest differences exist in the rural and suburban

TABLE I

SUMMARY TABLE FOR THE ANALYSIS OF VARIANCE TEST
USING THE EIGHT COMPROMISE CATEGORIES OF DISCIPLINARY TECHNIQUES

Source of Variation	df	SS	MS	F
Experience	1	.1562	.1562	<1
Grade level	1	.0840	.0840	<1
Type of school	2	3.9055	1.9527	2.1553
Compromise Categories	7	432.0321	61.7188	73.8900**
Exp. X Grade	1	1.6673	1.6673	1.8404
Exp. X School	2	2.3999	1.2000	1.3246
Exp. X Categories	7	10.3494	1.4784	1.6319
Grade X School	2	.6888	.3444	<1
Grade X Category	7	38.8660	5.5522	6.1289**
School X Category	14	30.1946	2.1567	2.3807**
Exp. X Gr. X Schl.	2	8.8388	4.4194	4.8784**
Exp. X Gr. X Category	7	14.1051	2.0150	2.2243*
Exp. X Schol. X Category	14	14.4779	1.0341	1.1415
Gr. X Schol. X Category	14	7.0781	.5055	<1
Exp. X Gr. X Schol. X Category	14	15.9680	1.1405	1.2589
Within Replicates	1344	1217.6247	.9059	
TOTAL	1439	1798.4757		

*p < .05
**p < .01

Figure 1.

FREQUENCY OF RESPONSES IN
EIGHT COMPROMISE CATEGORIES

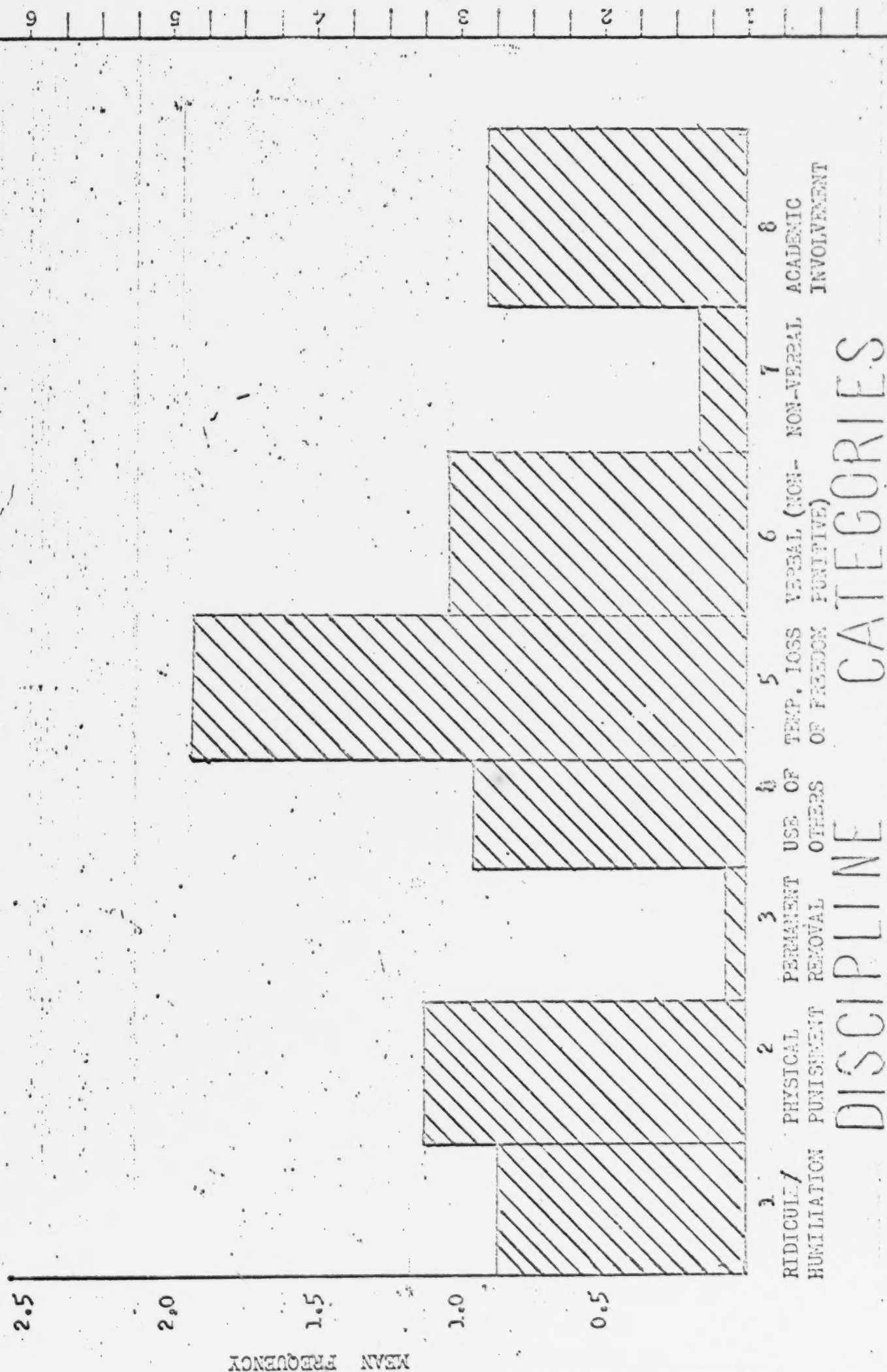


Figure 2. First Order Interaction of
Grade Level by Categories

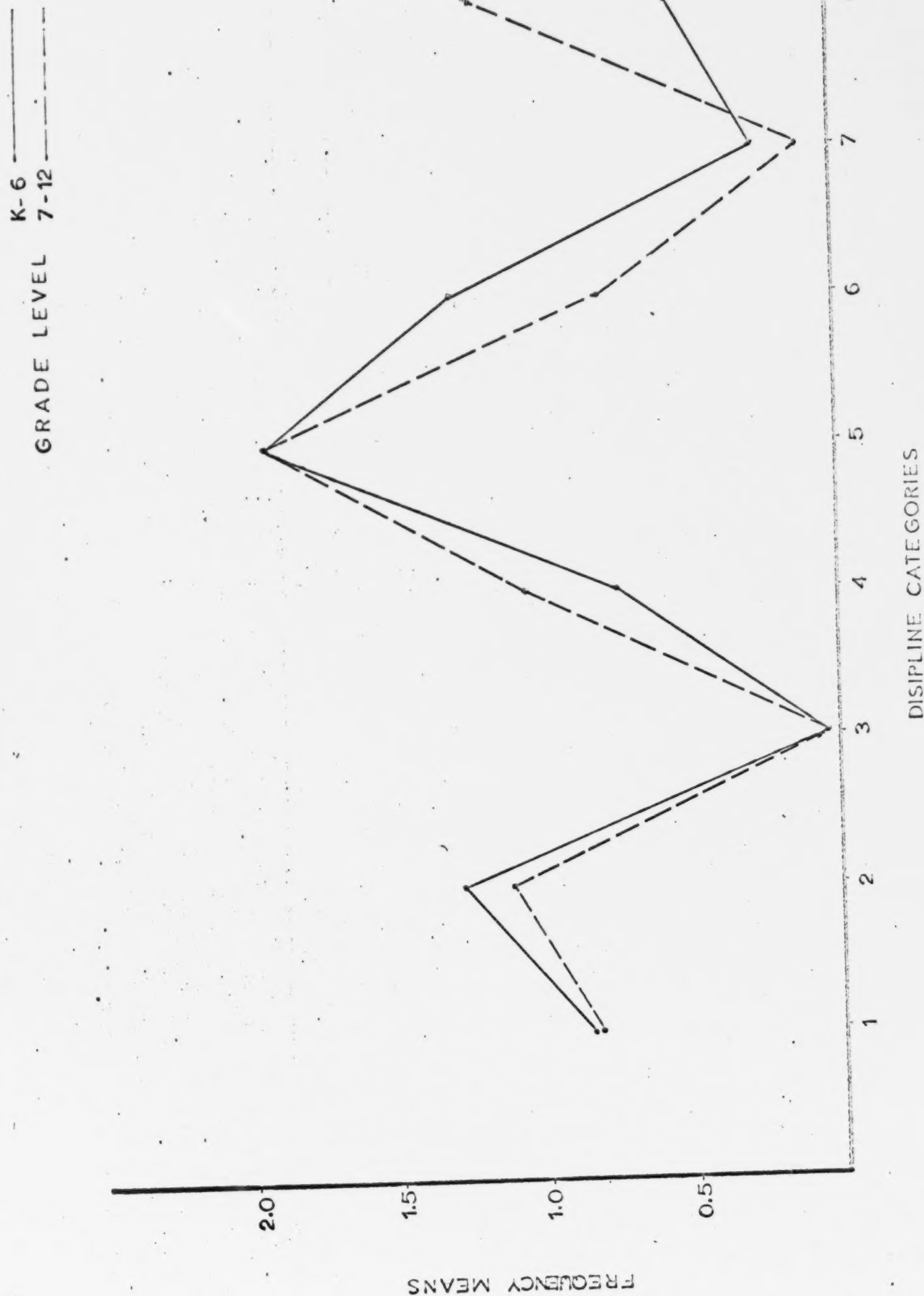
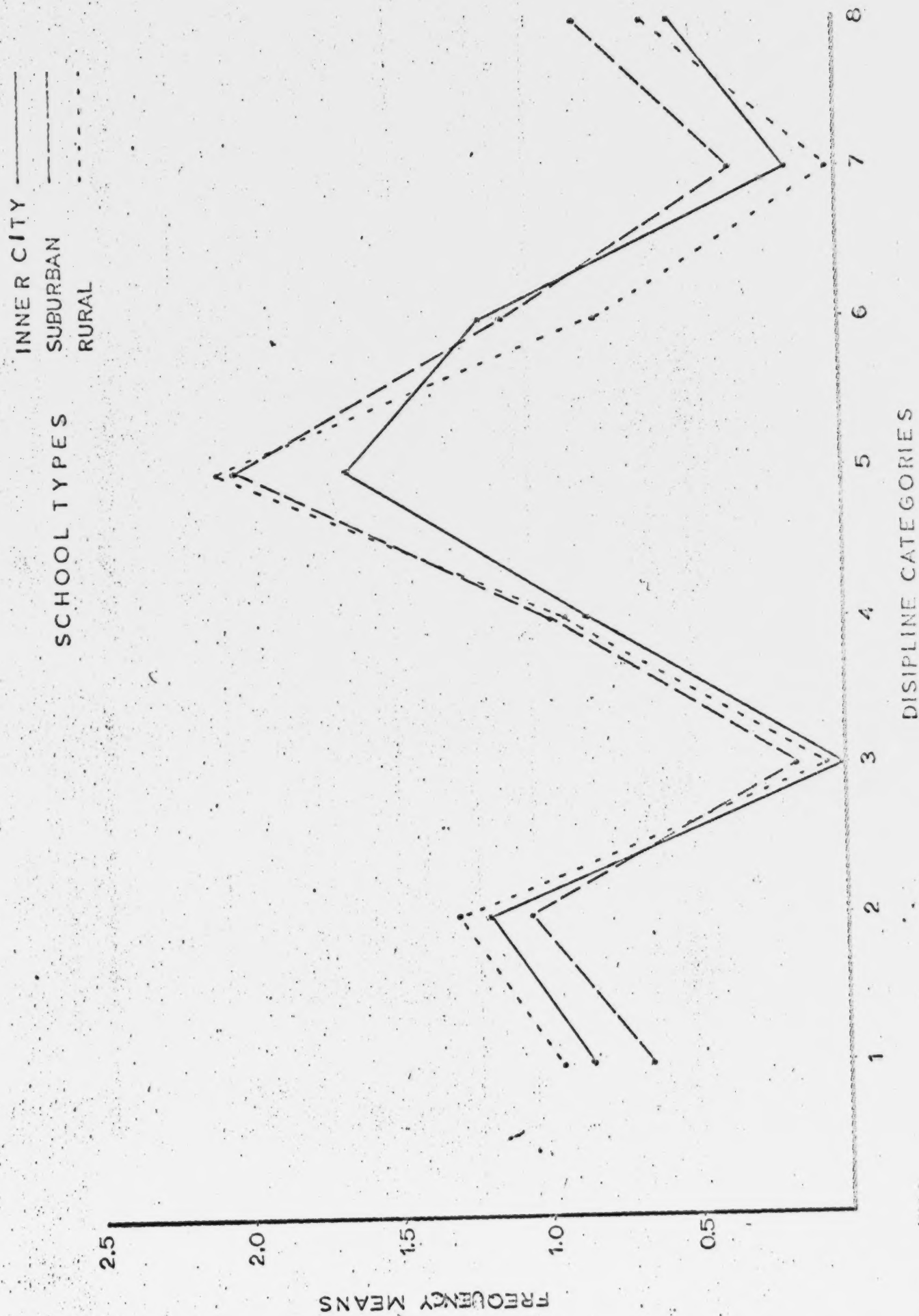


Figure 3. First Order Interaction of
School by Categories



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teachers in experience and grade levels. For example, rural elementary teachers with less than five years experience have larger repertoires than rural elementary teachers of five or more years experience. The exact opposite situation obtains with suburban schools, while inner-city schools remain relatively invariant.

A summary of the analysis using the five level severity scale is displayed in Table II. The significant main effect ($p < .01$), is across severity levels. Figure 5 illustrates this main effect. Level 2, which included primarily loss of freedom, use of others, and academic involvement techniques was the most frequently used category. Level 5, which included such specifics as reasoning and preventive techniques was used the least.

The only significant first order interaction ($p < .05$) was school by levels of severity. Figure 6 illustrates this interaction. The most significant differences seen in Figure 6 involve the inner-city schools in which teachers use fewer severe techniques than suburban and rural teachers, and more preventive or least severe techniques.

The significant third order interaction ($p < .05$) is illustrated in Figure 7. Deviations from uniform curves are most evident in the rural and inner-city schools. Most noteworthy is the increase in less severe disciplinary techniques with inner-city, 7-12 level teachers with five or more years experience.

The two analyses revealed significant main effects and significant interactions. Both significant main effects involved the discipline categories (compromise and severity levels). This significance may be interpreted to mean the disciplinary repertoires of teachers, irrespective of other variables, are unevenly constituted.

Figure 4. Second Order Interaction of Experience $\times$ Grade $\times$ School

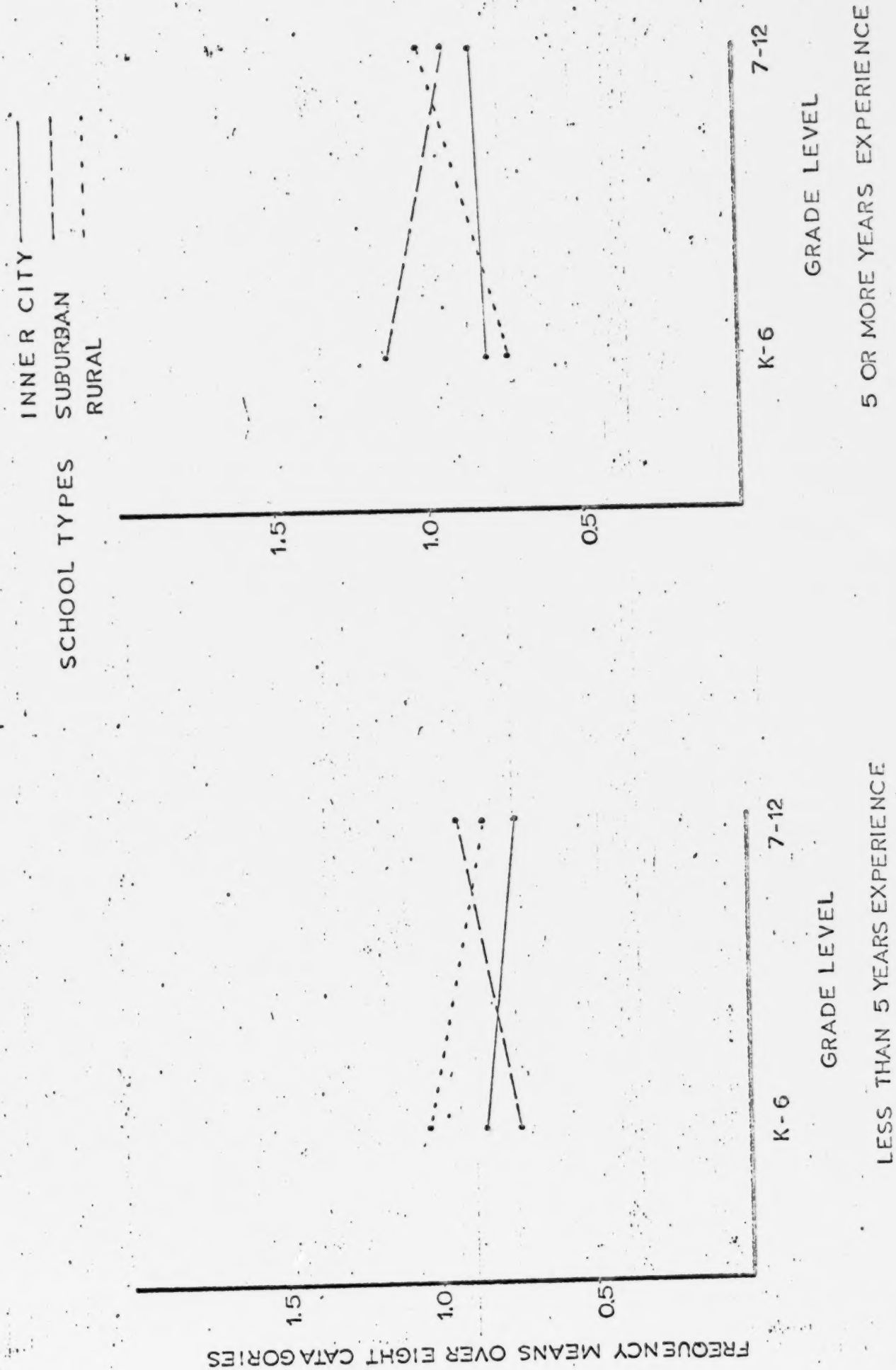


TABLE II

SUMMARY TABLE FOR THE ANALYSIS OF VARIANCE TEST
USING THE FIVE LEVELS OF SEVERITY CATEGORIES

Source of Variation	df	SS	MS	F
Experience	1	1.0677	1.0677	<1
Grade level	1	8.8011	8.8011	2.4560
Type of school	2	2.4266	1.2133	<1
Levels of severity	4	804.9052	201.2263	56.1549**
Exp. X Grade	1	6.9344	6.9344	1.9353
Exp. X School	2	4.5422	2.2711	<1
Exp. X Levels	4	5.4719	1.3679	<1
Grade X School	2	2.1955	1.0977	<1
Grade X Levels	4	33.7606	8.4401	2.3553
School X Levels	8	64.2074	8.0259	2.2397*
Exp. X Gr. X School	2	3.2356	1.6178	<1
Exp. X Gr. X Levels	4	17.1596	4.2899	1.1971
Exp X Schl. X Levels	8	12.8019	1.6002	<1
Gr. X Schl X Levels	8	43.1263	5.3908	1.5016
Exp X Gr. X Schl. X Levels	8	70.9638	8.8704	2.4754*
Within Replicates	840	3010.0676	3.5834	
TOTAL	899	4091.6662		

* $p < .05$

** $p < .01$

Figure 5. Frequency of Responses in 5 Severity Levels

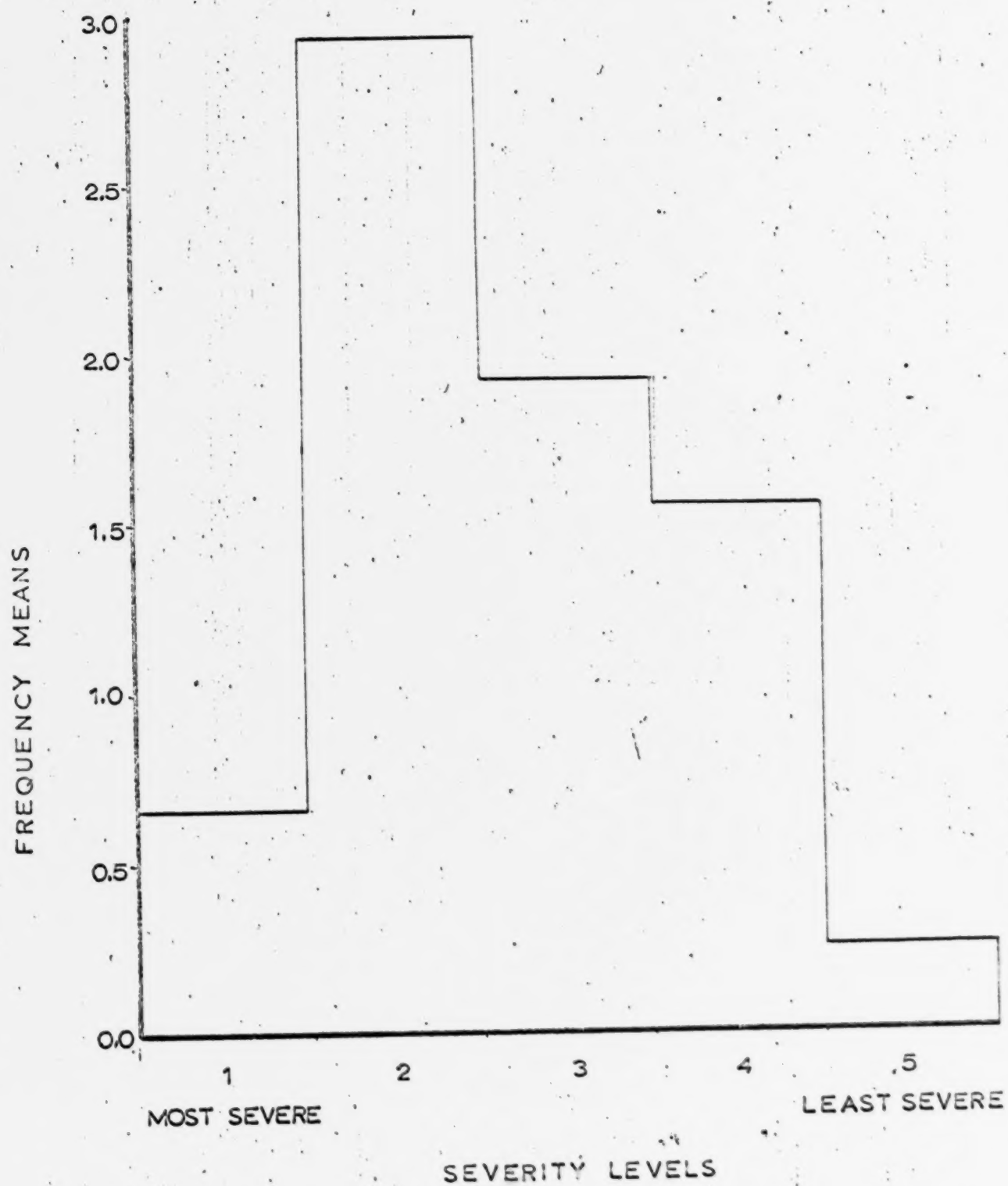


Fig. 6. First Order Interaction of Schools by Severity Levels

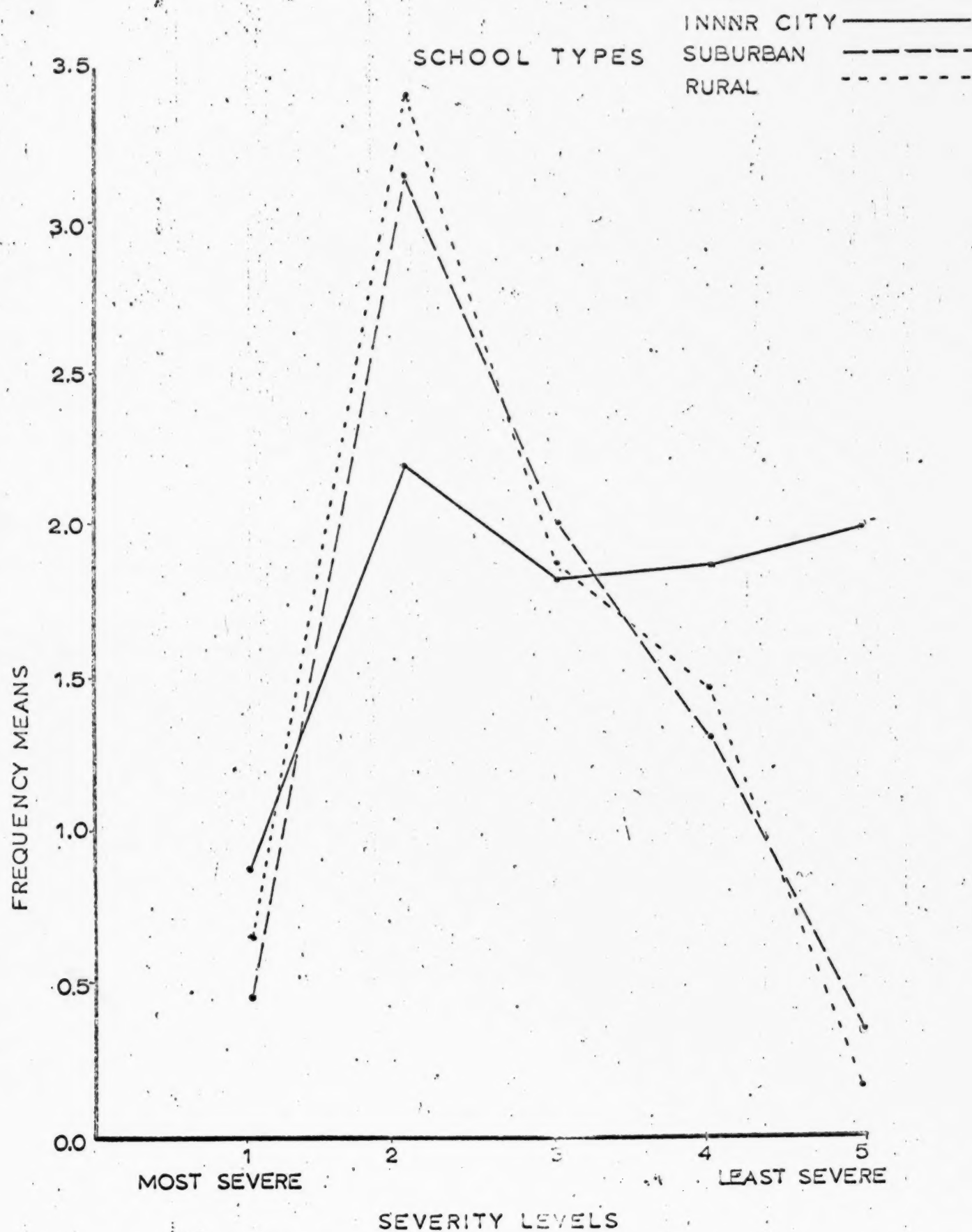
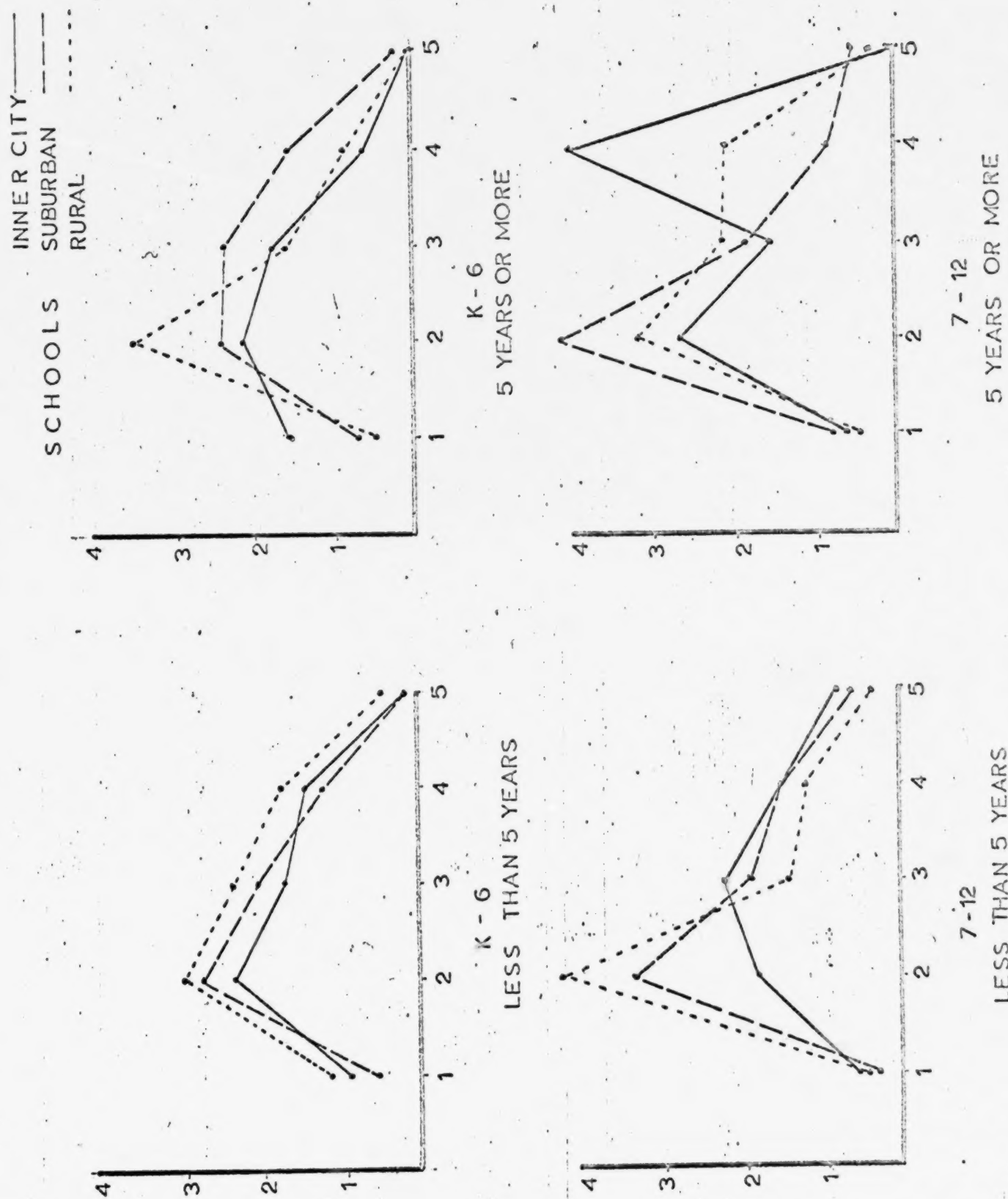


Figure 7. Third Order Interaction of
Exp. $\times$ Gr. $\times$ Sch. $\times$ Levels of Severity



That no other main effects were significant does not necessarily reduce the importance of ecological factors. The effect(s) of the behavioral settings simply interacted with each other and with other variables in the environment.

The results of the study provide support for Barker's (1968) predictions regarding the influence of the ecological environment on an individual and that individual's behavioral repertoire. It should be noted that the variables in the present study accounted for approximately thirty percent of the variance.

The unexplained variance in this study needs to be pursued further. First, there were a number of weaknesses in the study that could have introduced error variance. One of these might be the unwillingness of the teachers to write out their disciplinary repertoires; for a number of reasons, this might explain some of the seemingly puzzling results found with the inner-city schools. A second major weakness lies in the reliability of the scoring of a teacher's disciplinary repertoire. Another factor might be the demand characteristics of the study (Orne, 1962). Another source of error variance might be the systematic variance due to the personality of the teacher, the characteristics of the students, or the unique characteristics of a particular school and its administration.

The study suggests a number of possibilities for further research. The relationship between what a teacher writes down on a survey form and how that teacher behaves in the classroom needs to be explored so that the validity of the survey technique can be ascertained. Further factor analytic studies need to be pursued in order to further understand the relatedness of disciplinary techniques. The influence of the personality and professional preparation of the teacher needs

to be studied. It would be especially interesting to see how various types of training programs might modify teachers' disciplinary repertoires in more predictable directions. The influence of the ecological environment of the public school on both teachers' and students' behavioral repertoires is an area of study that needs further investigation.

APPENDIX

Appendix A

Survey of Disciplinary Techniques

Age _____ City _____

Sex _____ Name of School _____

Location of School (City) _____

Type of School: Inner City Suburban Rural

(Circle one)

Education: Circle the correct one. Bachelor's degree, Bachelor's and 15 hours,
Bachelor's and 15+ hours, Master's, Master's
and 15 hours, Master's and 15+ hours.

Grade level taught: Circle each of the grade levels taught; this can be more than
one. Place an X above the grade level you are presently
teaching.

1 2 3 4 5 6 7 8 9 10 11 12 College or University

Total number years of teaching experience _____

Below each of the grade levels listed above, indicate on the line the
approximate number of years of teaching experience.

Respond to the following request in terms of the grade level that you are
presently teaching.

First, list the types of disciplinary techniques that you use in your
classroom, then list all the techniques that you have heard about being used
with this grade level. Separate the two lists with a line so that we can tell
them apart.

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